



## RESOLUTION

**AUTHORIZATING THE MAYOR TO ENTER INTO A RAILROAD AGREEMENT  
WITH THE STATE OF NEW HAMPSHIRE AND PAN AM RAILWAYS FOR THE  
PURPOSE OF REPLACING A RAILWAY HIGHWAY CROSSING ON EAST HOLLIS  
STREET**

### ***CITY OF NASHUA***

*In the Year Two Thousand and Fifteen*

**RESOLVED** by the Board of Aldermen of the City of Nashua that the Mayor is authorized to execute the attached Railroad Agreement with the State of New Hampshire and Pan Am Railways for the purpose of replacing an at-grade railway highway crossing on East Hollis Street.

## LEGISLATIVE YEAR 2015

**RESOLUTION:**

**R-15-160**

**PURPOSE:**

**Authoring the Mayor to enter into a railroad agreement with the State of New Hampshire and Pan Am Railways for the purpose of replacing a railway highway crossing on East Hollis Street.**

**ENDORSER(S):**

**Mayor Donnalee Lozeau**

**COMMITTEE  
ASSIGNMENT:**

**FISCAL NOTE:**

The City's 10% share of \$32,121.67 will be funded through Capital Improvement appropriations in the General Fund and Wastewater Fund.

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### **ANALYSIS**

This resolution authorizes the Mayor to enter into the attached railroad agreement with the State of New Hampshire and Pan Am Railways for the purpose of replacing an at-grade railway highway crossing on East Hollis Street.

The city's 10% share of the total cost (\$32,121.67), will be funded from the following accounts: General Fund, Capital Improvements, Department 164-Traffic Account Classification "81" Capital Improvements - \$21,314.00; and Wastewater Fund, Department 169-Wastewater Account Classification "81" Capital Improvements - \$10,807.67  
"Sewer Rehabilitation Project"

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**Approved as to account  
structure, numbers,  
and amount:**

**Financial Services Division**

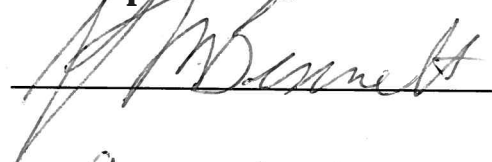
**By:**



**Approved as to form:**

**Office of Corporation Counsel**

**By:**



**Date:**

**August 4, 2015**

NASHUA  
X-A001(272)  
16394  
(EAST HOLLIS STREET)  
(PAN AM RAILWAYS  
RAILWAY-HIGHWAY CROSSING)

RAILROAD AGREEMENT

This Agreement is made in triplicate this \_\_\_\_\_ day of \_\_\_\_\_, 2015, by and between the STATE OF NEW HAMPSHIRE, by its Department of Transportation, hereinafter called the "State", the CITY OF NASHUA (Vendor # 177441), hereinafter called the "City", and PAN AM RAILWAYS (Vendor #160980), a Corporation duly organized and existing under the laws of the State of Delaware, and the SPRINGFIELD TERMINAL RAILWAY (collectively) authorized to do business in the State of New Hampshire, hereinafter called the "Railroad".

WITNESSETH:

WHEREAS, the State has approval of the Federal Highway Administration (FHWA), for a Federal-Aid Safety Transportation Improvement Program (STIP) Project (Organization Code 3054), NASHUA, NH 111, EAST HOLLIS STREET, 16394, X-A001(272) in the City of Nashua, County of Hillsborough, New Hampshire, which construction necessitates the replacement of an at-grade Railway-Highway crossing, in the amount of Six Hundred Thirty Eight Thousand Four Hundred Twenty One and 54/100 Dollars (\$638,421.54) with ninety percent (90% Hazard Elimination) and one hundred percent (100% Protective Devices) of that cost coming from Federal Highway funds, such amount being Six Hundred Six Thousand Two Hundred Ninety Nine and 87/100 Dollars (\$606,299.87), and ten percent (10%) shared cost coming from the City, such amount being Thirty Two Thousand One Hundred Twenty One and 67/100 Dollars (\$32,121.67); and

WHEREAS, the State, has prepared plans and specifications for such Project marked, NASHUA, NH 111, EAST HOLLIS STREET, 16394, X-A001(272), which plans and specifications meet with the approval of the Railroad and City and are on file in the permanent records of said Department of Transportation, Concord, New Hampshire; and,

WHEREAS, the State desires the assistance of the City and the Railroad in the installation/relocation/replacement of the aforementioned facilities,

NOW THEREFORE, in consideration thereof, the parties hereto mutually agree as follows:

1. The Railroad shall furnish the labor, materials, and equipment to perform the following:
  - A. Protect its property by whatever means deemed necessary from hazards as defined in the New Hampshire Standard Specification for Highway and Bridge Construction Special Provision Amendment to 104.07 and hereby appended to this agreement.
  - B. A Flagger shall be furnished for the protection of the Railroad's traffic, said Flagger shall be at the expense of the Project. An Inspector shall be furnished for the protection of the Railroad's property, said Inspector shall be at the expense of the Project.
  - C. Reconstruct said crossing using:
    1. 115 pound Welded Rail (butt weld preferred) or as approved by the State.
    2. Elastomeric Railseal Interface with A.D.A. GAUGE, railseal to extend minimum of 2 feet beyond edge of pavement, curb line, or sidewalk. A minimum of 15 feet section lengths shall be used through the crossing.
    3. Filter fabric, 14 inches x 7-3/4 inches, AREA 8, 8 hole double shouldered canted tie plates, spikes, tie plate pads and rail anchors shall be included.
    4. Joints and welds shall be staggered.
    5. End of rail shall be cropped prior to thermite welding so there will be no holes in areas of welds.
    6. 9 feet - 0 inches ties shall be used through the crossings with 8 feet - 6 inches ties in the approaches.
    7. Will perform necessary ditch reconstruction along its track to provide drainage.
    8. Remove unnecessary brush and materials along its right-of-way to open sight triangles to the crossings.

- D. The Railroad will coordinate with the City's or Contractor Forces so it can provide proper and timely detours. At time of construction, the Railroad will endeavor to cooperate with other utilities should the need arise to place their utility under the tracks.
  - E. The Railroad will strive to adjust its train schedule so as to allow as much time as possible for construction of said crossings.
  - F. Appropriate salvage credit will be given for all existing materials such as rails, ties, spikes, plates, etc, removed and replaced from the existing layout. If salvage material is classified as scrap, it will be made available for inspection and be disposed of locally.
  - G. Stone ballast will be a minimum depth of 12 inches throughout the limits of rail removed, and then taper to existing depths.
  - H. Install railroad signals as shown on the plans. Bases for said signals will be set a minimum of 8 feet behind edge of pavement, with 12 inches (Light Emitting Diodes) LED lights with a bell, reflective sheeting for crossbucks, and conforming to all current standards, MUTCD Part VIII and to plans and estimates, including all detection circuitry and other appurtenances required for a complete installation.
2. The City shall furnish the labor, materials, and equipment for the following work:
- A. Pave the crossing and approaches and reconstruct the roadway portion outside the rails, as shown on the attached plans and estimates, and construct and pave shoulders as required.
  - B. Additional roadway work such as necessary drainage, curbing and sidewalk reconstruction, and/or site work as agreed with the Contract Administrator.
  - C. Maintenance of highway traffic. This work will consist of providing competent flagmen with vests, furnishing, erecting and maintaining traffic signs and delineators at the required locations. Maintaining a detour, should one be established, including signing, lighting, etc.
  - D. Provide a detour, for the crossing during the time of construction.

**Method of Payment for Described Work:**

Work will be paid for at Actual Cost estimated as shown below:

East Hollis Street-NH 111

Preliminary Engineering Costs	\$25,000.00
10% Indirects	<u>\$ 2,500.00</u>
Total Preliminary Engineering Costs	\$27,500.00
90% Federal Aid	\$24,750.00
10% City Aid	\$ 2,750.00
Railroad Hazard Elimination Construction Costs	\$157,300.20
5% Construction Engineering Costs	<u>\$ 7,865.01</u>
Subtotal	\$165,165.21
10% Indirects	<u>\$ 16,516.52</u>
Total Railroad Hazard Elimination Construction Costs	\$181,681.73
90% Federal Aid	\$163,513.56
10% City Aid	\$18,168.17
City Hazard Elimination Construction Costs	\$97,000.00
5% Construction Engineering Costs	<u>\$ 4,850.00</u>
Subtotal	\$101,850.00
10% Indirects	<u>\$ 10,185.00</u>
Total City Hazard Elimination Construction Costs	\$112,035.00
90% Federal Aid	\$100,831.50
10% City Aid	\$11,203.50
Railroad Protective Devices Costs	\$274,636.20
5% Construction Engineering Costs	<u>\$ 13,731.81</u>
Subtotal	\$288,368.01
10% Indirects	<u>\$ 28,836.80</u>
Total Railroad Protective Devices Costs	\$317,204.81
100% Federal Aid	\$317,204.81
Total Federal Aid	\$606,299.87
Total City Share	\$ 32,121.67
Total Actual Cost	\$638,421.54

Preliminary Engineering Cost estimated at **\$25,000.00** (Work Class Code 1300)

Actual Construction Cost estimated at **\$581,299.87** (Work Class Code 2280)

Shared Cost due from City of Nashua **\$32,121.67**

Should the City of Nashua decide not to move forward with the construction of the railway-highway crossings, the City will be responsible for the total project cost expended to date.

**Billing for City's Contractor and Railroad's Participating Cost submitted to:**

Leonard Russell, Financial Reporting Administrator  
Bureau of Finance and Contracts  
New Hampshire Department of Transportation  
7 Hazen Drive, PO Box 483  
Concord, NH 03302-0483

**Detailed billing shall be submitted showing:**

- State Project Name & Number.
  - Organization and Work Class codes.
  - Brief description of work covered.
  - Dates work was started & completed.
  - Breakdown of quantities and costs for labor, equipment, materials and overhead expenses.
  - Signed Utility Reports
  - Whether billing is partial or final.
  - Invoice number.
  - Date of billing.
3. The finished grade of track will be set by the Railroad with the approval of the State and the City (to be determined at time of construction).
  4. The State and Railroad agrees that the City may let a contract or contracts for the construction of the work described in Paragraph 2 above, herein after referred to as the City's Contractor. Contractors shall be required to provide Railroad Protective Insurance as specified in the Standard Specification for Road and Bridge Construction Section 107.11 and appended to this agreement.
  5. The work described in Paragraphs 1 and 2 above will be accomplished under Railroad and City Highway Contracts, in accordance with the plans and specifications for same. The City agrees to reimburse the State for the actual City share of the costs. The City agrees to accept the operation, use, and maintenance of the facilities, as constructed. Failure to properly maintain these highway facilities

will disqualify the City from any future Federal-aid highway funds until such time as the deficient condition has been rectified and approved by the State and the Federal Highway Administration.

6. The work described in Paragraph 1 above, which will be done by Railroad forces is shown in greater detail, along with the lines of work, on the approved plans and in the attached estimates, said plans and estimates being made a part of this Agreement. Further, should the Railroad be unable to accomplish this work with their own forces, the Railroad may engage a qualified consultant to perform their required inspection services and may have any required maintenance-of-way performed under an existing continuing contract and/or by competitive bid contract. Continuing contracts shall be defined as a written contract with the Railroad and the contractor, which periodically does work for the Railroad. The Railroad will have awarded the continuing contracts using a competitive bid process, the attached documentation of which being made a part of this Agreement, and in compliance with 23 CFR 646.216(f). Contracts must be authorized by the State before work can be awarded.
7. The work described in Paragraph 2 above, will be done by City forces and/or under an existing continuing contract and/or by competitive bid contract. Continuing contracts shall be defined as a written contract with the City and the contractor which periodically does work for the City. The City will have awarded the continuing contracts using a competitive bid process, the attached documentation of which being made a part of this Agreement. Competitive bid contracts must be solicited by the City from at least three (3) contractors and authorized by the State before the work can be awarded.
8. The City and the Railroad agrees to notify the State of the starting and completion dates of the work hereinbefore described, and to complete Utility Reports showing the work performed, the classes and hours of labor, equipment and materials used, and the disposition of the materials replaced, along with the time and place abandoned or scrapped materials will be available for inspection. The City and Railroad further agrees to complete Utility Reports for work being done daily and deliver them weekly to the State's Contract Administrator for signature or mail them to the New Hampshire Department of Transportation, Highway Design 7 Hazen Drive, PO Box 483 Concord, NH 03302-0483 at the end of the week following that in which the work was performed. The Railroad and the City shall resolve any possible discrepancies. The Utility Reports are not the basis for payment, but are required for verification that the work was performed.
9. The Railroad agrees to permit the City, State, its agents, and contractors to enter upon said right of way and land of the Railroad for the purpose of performing the work described in Paragraph 2 above and as shown on approved plans.



10. In order to assure a proper installation, the City will assist the State in the inspection of the Contractor's work described in Paragraph 2 as required by the Project. Any issue shall be brought to the attention of the State's Contract Administrator immediately and he/she shall resolve it. The Contract Administrator will require the Contractor to take corrective action as necessary to provide an acceptable installation, relocation, and/or adjustment.
11. The City and Railroad agree to coordinate the work hereinbefore described with the Project and also agree to complete the work prior to or concurrently with the Project's completion date, provided the City and Railroad are not delayed by acts of God, strikes, or late delivery of critical materials.
12. The City and Railroad agree to perform the work hereinbefore proposed, in accordance with the plans mentioned above, including such additions or modifications hereafter approved, in writing, by the Railroad, the Commissioner, and the City. The amount of work to be performed by the City and Railroad, including any changes, shall be approved by the Commissioner and the City, before the work is performed, and the Railroad shall be reimbursed therefore, as hereinafter provided, except that the cost of any such railroad agreement or contract work which is not approved as above indicated shall be borne by either the City or the Railroad for which the work pertains.
13. In accordance with the **BUY AMERICA** requirements of the Code of Federal Regulations (23 U.S.C. 313 and 23 CFR 635.410), all manufacturing processes for steel and iron products or predominantly of steel or iron (at least 90% steel or iron content) furnished for permanent incorporation into the work on this project shall occur in the United States. The only exception to this requirement is the production of pig iron and the processing, pelletizing and reduction of iron ore, which may occur in another country. Other than these exceptions, all melting, rolling, extruding, machining, bending, grinding, drilling, coating, etc. must occur in the United States.
  - A. Products of steel include, but are not limited to, such products as structural steel, piles, reinforcing steel, structural plate, steel culverts, guardrail steel supports for signs, signals and luminaires, and cable wire/strand. Products of iron include, but are not limited to, such products as cast iron frames and grates and ductile iron pipe. Coatings include, but are not limited to, the applications of epoxy, galvanizing and paint. The coating material is not subject to this clause, only the application process.
  - B. A Certificate of Compliance (available at [www.NHDOT.com](http://www.NHDOT.com)) shall be furnished for steel and iron products as part of the backup information with the billing. Records to be maintained by the Railroad for this certification shall include a signed mill test report and a signed certification by each

supplier, distributor, fabricator, and manufacturer that has handled the steel or iron product affirming that every process, including the application of a coating, performed on the steel or iron product has been carried out in the United States of America, except as allowed by this Section. The lack of these certifications will be justification for rejection of the steel and/or iron product or non-payment of the work.

- C. The requirements of said law and regulations do not prevent the use of miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the above products, manufactured products that are not predominantly steel or iron or a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1%) of the total contract price or \$2,500.00, whichever is greater.
  - D. Upon completion of the project, the City and Railroad shall certify in writing as to compliance with this Section and also provide the total project delivered cost of all foreign steel and/or iron permanently incorporated into the work covered by this Agreement. The form for this certification entitled "Buy America Certificate of Compliance" can be found at [www.NHDOT.com](http://www.NHDOT.com).
14. During the final audit of the work, the State will compute the quantities and costs of items related to the replacement of an at-grade Railway-Highway crossing, along with any roadway approach and side walk work required to reconstruct the crossing, plus construction engineering estimated at 5% and 10% for overhead expenses. If these costs exceed the amount paid, the State will bill the City for the balance due. If they are less, the State will forward a check in the amount of the balance to the City.
  15. All cost records of the City and Railroad pertaining to the project will be subject at any time to inspection by representatives of the State and Federal governments for a period of not less than three (3) years from the date final payment is received by the City and Railroad.
  16. The City and the Railroad agree to make the necessary changes in their facilities to the extent required to permit the construction of the project; also agree to construct such facilities in addition to those provided in the contract as may be needed for maintaining traffic during such changes in their facilities and the construction of said project in accordance with and as shown in more detail upon the above described plans.
    - A. The work to be done by the Railroad to accomplish the above described changes shall consist of the following: furnish labor, materials and

equipment for (1) Preliminary Engineering (\*); (2) Office Engineering (\*); (3) Field Engineering and Supervision (\*); (4) Install New Crossing (\*); (10) Accounting; (11) Preliminary Engineering (\*\*); (12) Office Engineering (\*\*); (13) Field Engineering and Supervision (\*\*); and (14) Installation of Flashing Signals (\*\*).

(\*) Construction Department

(\*\*) Communication and Signal Department

- B. An itemized estimate of the cost of the work, including materials to be furnished by the City and Railroad is attached hereto and made a part of this Agreement. Reimbursement, however, will be on an actual cost basis, the work being shown in greater detail on the State, City's, and Railroad's plans.
  - C. All work shall be performed in a good, workman like manner under competent, experienced supervision, per current railway engineering and construction practice.
  - D. No work that requires the railroad to move and adjust its facilities at its own expense as defined in 23 CFR 646.216 (d) (2) (iv) is included in this agreement.
17. Federal, State, and City participation in the cost of the work done under this Agreement shall be computed on the basis of the provisions and regulations of the 23 CFR 646 and 23 CFR Part 140, Subpart I. The above-mentioned code, including all current amendments and/or revisions, is hereby made a part of this Agreement.
  18. The Railroad agrees to accept the operation, use and maintenance of the crossing and crossing protection (signals with a bell), described in Paragraph 1 above, and to maintain the crossing protection in an operable approved manner.
  19. Upon the receipt of satisfactory detailed progress vouchers, or one final voucher, with applicable credit shown for salvage, or scrap and betterments, the State agrees to reimburse the Railroad for the cost of preliminary engineering, and for all labor, including flagging, and materials furnished to perform the work as described in the previous paragraphs and as shown on the approved plans, also for maintaining railroad traffic during the construction of this project and for such engineering expenses as are necessary for the general protection of the Railroad's property and operations during construction. Payment shall be made by the State to the Railroad within sixty (60) days after completion and acceptance of the work by the Railroad. However, the State shall be under no obligation to make payment for the costs of any work for which Utility Reports are not submitted in accordance with Paragraph 8 above or any work, other than preliminary engineering, performed prior to the date

the Railroad is authorized, in writing, by the State to proceed with such approved work or whenever the Railroad violates the conditions set forth in this Agreement.

20. All parties agree that this project is a joint project between the State, the City and the Railroad, therefore, all parties will cooperate fully to the extent possible to pursue said project to completion.
21. It is hereby mutually agreed by the State and the Railroad that when conditions are such that the signals installed under Section 1 of this Agreement are no longer needed at this location, the State will be paid by the Railroad or its successors an amount equal to the then current salvage value of the signals, supports and crossing less the cost of the removal of said facilities or the State will petition the New Hampshire Department of Transportation, Bureau of Rail and Transit, for the reinstallation of these signals by the Railroad at another crossing of a public highway on the Railroad's lines within the State, using such funds other than Railroad funds, as may be available at that time.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first above written.

THE STATE OF NEW HAMPSHIRE  
Department of Transportation

By: \_\_\_\_\_

Christopher M. Waszczuk, P.E.  
Director of Project Development

PAN AM RAILWAYS

By: \_\_\_\_\_

(Signature)

THE CITY OF NASHUA

By: \_\_\_\_\_

DonnaLee Lozeau  
Mayor, City of Nashua

\_\_\_\_\_  
(Typed Signature)

\_\_\_\_\_  
(Title)

JAM

JAM

\_\_\_\_\_  
(Date)

SPRINGFIELD TERMINAL RAILWAY COMPANY

ENGINEERING DEPARTMENT

NASHUA, NEW HAMPSHIRE

CONSTRUCTION ESTIMATE

RECONSTRUCTION OF A PUBLIC AT-GRADE CROSSING CARRYING EAST HOLLIS STREET OVER THE TRACK OF THE NORTHERN  
MAIN LINE AT MILE POST 0.15 IN NASHUA, NEW HAMPSHIRE

STATEMENT OF WORK TO BE PERFORMED BY SPRINGFIELD TERMINAL RAILWAY COMPANY.  
FURNISH LABOR, EQUIPMENT AND MATERIAL AND OTHER SERVICES AS REQUIRED.

1. CONSTRUCTION - PRELIMINARY ENGINEERING
2. CONSTRUCTION - OFFICE ENGINEERING
3. CONSTRUCTION - FIELD ENGINEERING, SUPERVISION, AND CONSTRUCTION INSPECTION
4. REMOVE 1 TURNOUT. CONSTRUCTION - RECONSTRUCT GRADE CROSSING & INSTALL FLANGEWAY. REPLACE TIMBER @ 1 TURNOUT.
10. ACCOUNTING
11. SIGNAL - PRELIMINARY ENGINEERING
12. SIGNAL - OFFICE ENGINEERING
14. SIGNAL - INSTALLATION AND TESTING
16. SIGNAL - SHOP WIRING

ITEM	LABOR	MATERIAL	SALVAGE	EQUIPMENT	OTHER	TOTAL
1.	\$1,000.00					\$1,000.00
2.	\$1,700.00	\$200.00		\$200.00	\$200.00	\$2,300.00
3.	\$1,700.00			\$500.00		\$2,200.00
4.	\$57,765.00	\$68,235.20	(\$500.00)	\$24,000.00		\$149,500.20
10.	\$1,700.00	\$200.00		\$200.00	\$200.00	\$2,300.00
11.	\$1,020.00				\$0.00	\$1,020.00
12.	\$0.00				\$14,000.00	\$14,000.00
14.	\$60,355.20	\$184,321.00	\$0.00	\$28,940.00	\$0.00	\$251,616.20
16.	\$0.00	\$0.00	\$0.00	\$0.00	\$8,000.00	\$8,000.00
	\$125,240.20	\$232,956.20	(\$500.00)	\$51,840.00	\$14,400.00	\$431,936.40

\$157,300.20

\$274,636.20

NOTE #1 THE ABOVE COST IS FOR ESTIMATE PURPOSES ONLY. BILLINGS WILL BE MADE ON ACTUAL COST.

NOTE #2 ASSUME CITY OF NASHUA AND/OR CONTRACTOR WILL BE RESPONSIBLE FOR SETTING UP AND MAINTAINING  
VEHICULAR TRAFFIC DETOUR DURING ROAD CLOSURE AND ROADWAY PAVING INCLUDING ALL ASSOCIATED COSTS.

DATE: May 20, 2015

  
TED KRUG, PE  
CHIEF ENGINEER OF DESIGN & CONSTRUCTION

**SPRINGFIELD TERMINAL RAILWAY COMPANY  
BOSTON & MAINE CORPORATION  
ENGINEERING DEPARTMENT  
SUMMARY ESTIMATE (LABOR/EQUIP/MAT)**

**LOCATION:** NASHUA, NEW HAMPSHIRE @ MILE POST 0.15 OF THE HILLSBORO BRANCH LINE

**DESCRIPTION:** RECONSTRUCT GRADE CROSSING, RETIRE 1 TURNOUT, REBUILD 1 TURNOUT.

		<u>UNIT</u>	<u>QUANTITY</u>	<u>PRICE</u>	<u>AMOUNT</u>	<u>TOTAL</u>
ITEM #1	PRELIMINARY ENGINEERING	LS	1		\$1,000.00	\$1,000.00
ITEM #2	OFFICE ENGINEERING					
	LABOR	MD	5	\$200.00	\$1,000.00	\$1,000.00
	OVERHEAD (70%)	%			\$700.00	\$700.00
	MATERIAL	LS			\$200.00	\$200.00
	EQUIPMENT	LS			\$200.00	\$200.00
	OTHER	LS			\$200.00	\$200.00
	SUBTOTAL					\$2,300.00
ITEM #3	FIELD ENGINEERING					
	LABOR	MD	5	\$200.00	\$1,000.00	\$1,000.00
	OVERHEAD (70%)	%			\$700.00	\$700.00
	EQUIPMENT	DAY	5	\$100.00	\$500.00	\$500.00
	SUBTOTAL					\$2,200.00
ITEM #4	FIELD CONSTRUCTION					
	LABOR	CD	15	\$2,030.00	\$30,450.00	\$30,450.00
	OVERHEAD (70%)	%			\$21,315.00	\$21,315.00
	PER DIEM	PER DAY	15	\$400.00	\$6,000.00	\$6,000.00
	MISC LABOR (TRAFFIC OFFICERS)	HR	0	\$30.00	\$0.00	\$0.00
	MATERIAL	SEE ATT				\$68,235.20
	SALVAGE	LS			(\$500.00)	(\$500.00)
	EQUIPMENT	DAY	15	\$1,600.00	\$24,000.00	\$24,000.00
	SUBTOTAL					\$149,500.20
ITEM #10	ACCOUNTING					
	LABOR	MD	5	\$200.00	\$1,000.00	\$1,000.00
	OVERHEAD(70%)	%			\$700.00	\$700.00
	MATERIAL	LS	1		\$200.00	\$200.00
	EQUIPMENT	LS			\$200.00	\$200.00
	OTHER	LS			\$200.00	\$200.00
	SUBTOTAL					\$2,300.00
	TOTAL ITEMS 1 THRU 10					\$157,300.20

**NOTE #1** THE ABOVE IS FOR ESTIMATE PURPOSES ONLY. BILLING WILL BE MADE ON ACTUAL COST.

**SPRINGFIELD TERMINAL RAILWAY COMPANY**

**MAINE CENTRAL RAILROAD CO.**

**ENGINEERING DEPARTMENT**

**MATERIAL LISTING - CROSSING WORK**

**LOCATION:** NASHUA, NEW HAMPSHIRE @ MILE POST 0.15 OF THE HILLSBORO BRANCH LINE  
**DESCRIPTION:** RECONSTRUCT GRADE CROSSING,

**156 FT (1 X 156 FT PANEL)**

<b>MATERIAL</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>PRICE</b>	<b>TOTAL</b>
RAIL 2-115# x 156 FT CWR	FT	312	\$30.00	\$9,360.00
TIE PLATE (5 1/2")	EA	96	\$5.00	\$480.00
TIE PADS	EA	112	\$3.00	\$336.00
RAIL ANCHOR	EA	192	\$2.50	\$480.00
THERMIT WELD (115#)	EA	6	\$125.00	\$750.00
A' TIES (8'-8")	EA	48	\$55.00	\$2,640.00
A' TIES (9')	EA	56	\$60.00	\$3,360.00
TRACK SPIKES	EA	416	\$1.00	\$416.00
JOINT BARS 115#	PR	4	\$100.00	\$400.00
STEP JOINTS 115# RE / 85 AS	PR	0	\$675.00	\$0.00
GEOTEXTILE	SY	250	\$3.00	\$750.00
BALLAST STONE	TON	300	\$25.00	\$7,500.00
CROSSING SURFACE(EPFLEX) W/ CLIPS	TK-FT	90	\$90.00	\$8,100.00
SUBTOTAL				\$34,572.00
MISC. & MATERIALS OVERHEAD (10%)				\$3,457.20
TOTAL				\$38,029.20

**NOTE #1** THE ABOVE COST IS FOR ESTIMATE PURPOSES ONLY. BILLINGS WILL BE MADE ON ACTUAL COST.

**NOTE #2** ESTIMATE DOES NOT INCLUDE BITUMINOUS ASPHALT PAVING. NHDOT OR CITY OF NASHUA WILL BE RESPONSIBLE FOR SETTING UP AND MAINTAINING VEHICULAR DETOUR DURING ROAD CLOSURE AND ROADWAY PAVING INCLUDING ALL ASSOCIATED COSTS.

**SPRINGFIELD TERMINAL RAILWAY COMPANY**

**MAINE CENTRAL RAILROAD CO.**

**ENGINEERING DEPARTMENT**

**MATERIAL LISTING - TURNOUT WORK**

**LOCATION: NASHUA, NEW HAMPSHIRE @ MILE POST 0.15 OF THE HILLSBORO BRANCH LINE**  
**DESCRIPTION: RETIRE 1 TURNOUT & REPLACE TRACK, REBUILD 1 TURNOUT.**

<b>MATERIAL</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>PRICE</b>	<b>TOTAL</b>
RAIL 115# RELAY	FT	312	\$25.00	\$7,800.00
TIE PLATE (5 1/2")	EA	200	\$5.00	\$1,000.00
TURNOUT TIMBER PACKAGE	EA	1	\$6,000.00	\$6,000.00
RAIL ANCHOR	EA	0	\$3.00	\$0.00
SWITCH STAND	EA	1	\$1,500.00	\$1,500.00
THERMIT WELD (115#)	EA	0	\$125.00	\$0.00
A" TIES	EA	0	\$55.00	\$0.00
B" TIES	EA	100	\$40.00	\$4,000.00
TRACK SPIKES	EA	960	\$1.00	\$960.00
JOINT BARS 115#	PR	10	\$100.00	\$1,000.00
STEP JOINTS 115# RE / 85 AS	PR	4	\$675.00	\$2,700.00
BALLAST STONE	TON	100	\$25.00	\$2,500.00
SUBTOTAL				\$27,460.00
MISC. & MATERIALS OVERHEAD (10%)				\$2,746.00
TOTAL				\$30,206.00



# Cover

## Summary Estimate (Labor, Equipment & Material) Communications & Signal Department for East Hollis Street - Nashua, NH AHCP Design & Installation

Item No.	Description	Unit	Quantity	Price	Total
11	Preliminary Engineering				
	Labor	M/Day	2	\$300.00	\$600.00
	Labor Additives		70%	-	\$420.00
	Total Preliminary Engineering				\$1,020.00
12	Contract Engineering				
	Design/Admin	M/Day	10	\$1,400.00	\$14,000.00
	Total Design				\$14,000.00
16	Contract Wiring				
	Design/Admin	LS	1	\$8,000.00	\$8,000.00
	Total Signal Shop				\$8,000.00
14	Installation & Testing				
	Labor	C/Day	12	\$2,488.00	\$29,856.00
	Labor Additives		70%	-	\$20,899.20
	Equipment	C/Day	12	\$2,245.00	\$26,940.00
	Expenses	Day	12	\$800.00	\$9,600.00
	Total Installation & Testing				\$87,295.20
	Materials				
	House Materials (Cases, Electronics, Batteries)				\$103,644.92
	Ground Materials (Cable, Conduit)				\$15,662.76
	Wayside (Signals & Switches)				\$0.00
	AHCP (Flashers & Gates)				\$23,580.15
	Tax & Freight	15.00%			\$21,433.17
	Total Materials				\$184,321.00
	Total C&S Project				\$274,636.20

# House

## House Material

### PTMW

PTMW 8x10 Bungalow	EA	1	57439	\$14,000.00	\$14,000.00
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### GE Global Signaling

ElectroLogiXS XP4 Assy (9 Slot) 1 Trac	CFG	1	16-220000400-00	\$19,813.00	\$19,813.00
Crossing Lamp Controller (XLC)	EA	4	250991-000	\$1,136.00	\$4,544.00
XLC Relay Base Kit	EA	4	251071-100	\$101.00	\$404.00
Vital Logic Gate (VLG) 3-12 sec. delay	EA	1	250948-020	\$877.00	\$877.00
Relay Base Kit (VLG PN 250948-020)	EA	1	251071-010	\$85.00	\$85.00
Assy NBS-2 w/10'Leads XXX HZ	EA	2	250568-JXX	\$544.00	\$1,088.00

ACG-2T - AC Generator for Style C Circ	EA	1	800-003564-000	\$198.00	\$198.00
Ring10 Rectifier	EA	1	800-004080-000	\$119.00	\$119.00
TD-1A - Track Driver for Style C Track C	EA	1	800-003565-001	\$339.00	\$339.00

19" Rack GE: 19" RK 6'11" DBL TAP RL	EA	1	202080-103	\$840.55	\$840.55
Relay Mounting Bar (BAR MTG 19" GR	EA	6	122272-009	\$56.35	\$338.10
SHELF PULL OUT 19" RK MNT BLK	EA	1	028429-000	\$226.55	\$226.55
Tie Bar 19" W/GRAY PNT	EA	6	123581-002	\$171.35	\$1,028.10

24" Rack	EA	1	202024-034	\$2,339.10	\$2,339.10
Relay Mounting Bar	EA	6	122273-001	\$211.60	\$1,269.60
Tie Bar	EA	6	123584-001	\$233.05	\$1,398.30

### Siemens

PSO 4000 Transmitter	EA	2	7000-7A471-0001	\$2,315.25	\$4,630.50
PSO 4000 Receiver	EA	2	7000-78473-0001	\$3,031.88	\$6,063.76
PSO 4000 Receiver Coupler	EA	2	7000-7A355-xxxHZ	\$840.44	\$1,680.88
Argus Wayside Recorder	Assy	2	8000-80311-0002	\$1,824.64	\$3,649.28
Ilod	Assy	4	8000-80271-0000	\$691.46	\$2,765.84
Assy Single Row Term 12 Post	EA	12	023390-11X	\$38.50	\$462.00
Res Adj ww 15W 1.3ohm	EA	12	002014-005	\$55.88	\$670.56
36" Buss Strips 1" Centers	EA	6	023839-12	\$17.68	\$106.08
Conn Term Strap 1" Ctrs.	EA	12	02839-2	\$2.00	\$24.00
Res Adj ww 15W 6.3ohm	EA	2	029603-3X	\$55.88	\$111.76
Res Adj ww 15W 16ohm	EA	2	029603-7X	\$55.88	\$111.76
Arrestor Ltng HD	EA	80	022615-1X	\$26.74	\$2,139.20
HD Arrests w/ 3 Post Blocks	EA	15	4000-44700-005X	\$62.00	\$930.00
Equalizers HD w/o base 22700-1x	EA	10	022700-5X	\$32.82	\$328.20
Term BLK BATT 3wire Lead Acid	EA	4	023100-X	\$53.49	\$213.96
Test link w/ Gold Nuts	ASSY	12	024620-1X	\$3.05	\$36.60
Padlock, Hexagon	EA	4	030399-31X	\$29.63	\$118.52

### NRS

EA-09 Batteries	EA	6	MCT-09	\$465.00	\$2,790.00
EA-011 Batteries	EA	6	MCT-011	\$500.00	\$3,000.00

### RECO

Charger 40A 12v Cragg 40ETC-12V	EA	2	40ETC-12V	\$590.00	\$1,180.00
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### INDEPENDENT ELECTRIC

House					
Expansion Foam Can	EA	2	GreatStuff	\$5.00	\$10.00
Compound Duct Seal 5lb Bag	EA	5	1179-1	\$8.86	\$44.30
Panduit Cable Marker Ties	PK	1	SSM2S-C	\$75.91	\$75.91
<b>ERICO</b>					
EPD 12/24 Secondary Power Protector	EA	1	010092-022	\$249.80	\$249.80
EPD 120 VAC Secondary Power Protector	EA	2	010092-023	\$249.80	\$499.60
4 Post Terminal Blocks	EA	102	S2700A2C1WH	\$23.72	\$2,419.44
Buss Strap 48"	EA	4	B2700HC36T	\$39.41	\$157.64
<b>WCH</b>					
Single Pole Knife Switch	EA	1	0250-101	\$19.50	\$19.50
<b>L&amp;W Industries</b>					
Ground Plate	EA	2	SA23000-X	\$52.43	\$104.86
Manual Control Box	EA	1	3A8000-X	\$183.75	\$183.75
Power Off Light	EA	1	2A70373	\$16.91	\$16.91
<b>NEWARK</b>					
Hubbell Flanged Inlet	EA	2	HBL7467	\$20.24	\$40.48
Hubbell Connector Twist Lock	EA	1	HBL7464V	\$17.60	\$17.60
AMP LUG RING 1/4" 16-14AWG	EA	500	327743	\$0.36	\$180.00
AMP LUG RING 1/4" 12-10AWG	EA	500	35273	\$0.31	\$155.00
RLY DPDT 12VDC 10A OCT W/Lamp	EA	1	21F1071 KRPA-11AN-12	\$17.75	\$17.75
RLY DPDT 120VAC 10A OCT W/Lamp	EA	1	17M9928 KRPA-11AN-120	\$17.99	\$17.99
SCKT RLY 8 PIN - Wall Mount	EA	2	57F3431 27E122	\$6.46	\$12.92
Trouble Indication Strobe	EA	1	S&C: 120-10	\$60.00	\$60.00
<b>ALSTOM</b>					
Relay B 500 Ohm Neutral 4FB-2F-1B	EA	12	56001-783-02	\$655.00	\$7,860.00
B1 Plugboard Kit	EA	12	59686-005-01	\$119.00	\$1,428.00
<b>HURLEY</b>					
Softdrawn #8 ground wire roll	FT	50	BS6	\$0.42	\$21.00
1 Conductor #10 case wire	FT	500	152-11-3038	\$0.67	\$335.00
1 Conductor #14 case wire	FT	1000	152-11-3024	\$0.46	\$460.00
TC Blue #10 Duplex Tower and Case V	FT	100	152-11-3039	\$2.18	\$217.50
6AWG CU19W	FT	50	151-12-1201	\$1.95	\$97.50
Mark Up				\$9,422.27	
Total House				\$103,644.92	

## Ground

### Ground Material

#### GETS

2 Conductor #6 track cable	FT	1000	150-12-3933	\$2.50	\$2,500.00
19 Conductor 6#6 13#14 gate cable	FT	300	012243-400	\$13.00	\$3,900.00
5 conductor #9 Signal Cable	FT	500	208-11-6925	\$5.00	\$2,500.00
12 Conductor #14 Cable	FT	100	208-11-6892	\$5.00	\$500.00
3C#2 Power Cable	FT	100	112-10-3874	\$7.00	\$700.00
Bare Copper 6AWG	FT	100	BS6S	\$0.40	\$40.00

#### GRAYBAR

Conduit- 4" Sch 80	FT	570	11589	\$3.00	\$1,710.00
5/8" clamp for ground rod	EA	6	40499	\$1.63	\$9.78
Greenlee Polyline 6500'	EA	1	430	\$8.85	\$8.85
PVC Glue	EA	1	29796	\$9.90	\$9.90

#### SENECA

Insulated Joints with Pins	PR	4		\$350.00	\$1,400.00
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#### L&W

Bootleg Hose	EA	10	CA1755	\$6.16	\$61.60
3/16 to 3/16 Sleeve	EA	100	BA2367J	\$1.00	\$100.00
3/16 to 6 Solid Sleeve	EA	100	BA2363J	\$1.00	\$100.00

#### ERICO

3/16 Bondstrand	FT	100	SBS6TCINS	\$1.80	\$180.00
5/8" x 8' Ground Rod	EA	6	615880	\$10.29	\$61.74
Joint Head Bonds	EA	100		\$4.57	\$457.00

Mark Up      \$1,423.89

Total Ground    \$15,662.76

**Wayside Material**

**Wayside**

**Total Wayside      \$0.00**

# AHCP

## Automatic Highway Crossing Protection

### RoadSafe

Emergency Contact Sign and Posts	Assy	2		\$100.00	\$200.00
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### Western Cullen Hayes

4" Standard Mast 15'3"	EA	3	715-50-U-2	\$305.00	\$915.00
4" Junction Box Base	Assy	3	2146-A-11	\$305.00	\$915.00
Pinnacle	EA	1		\$16.50	\$16.50
4" Back to Back Flasher Assy	Assy	4	975-918-4-MF	\$1,664.00	\$6,656.00
4" One Way Flasher Assy	Assy	2		\$950.00	\$1,900.00
Crossbuck - High Intensity	Assy	2	3380-780-711-4	\$172.00	\$344.00

### GSI

Electronic Bell	Assy	2	EB-3-360-5	\$195.00	\$390.00
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### Pelmac Recording Equipment

Recording Equipment	Assy	1		\$6,000.00	\$6,000.00
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### Dixie Precast

Concrete Flasher Foundations	EA	2	DPS-1A	\$550.00	\$1,100.00
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### Herzog Technologies

Flasher Assembly/Wiring	EA	3		\$1,000.00	\$3,000.00
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Mark Up	\$2,143.65
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Total AHCP	\$23,580.15
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**EAST HOLLIS STREET RAILROAD CROSSING**  
Preliminary Estimate

6/15/2015

<u>Item No.</u>	<u>Item Description</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Cost</u>
202.61	CURB REMOVAL FOR STORAGE (LANDFILL)	270	LF	\$ 10.00	\$ 2,700.00
203.1	COMMON EXCAVATION	110	CY	\$ 5.00	\$ 550.00
214.	FINE GRADING	1	U	\$ 1,000.00	\$ 1,000.00
304.3	CRUSHED GRAVEL (F)	100	CY	\$ 35.00	\$ 3,500.00
403.11	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	170	TON	\$ 81.00	\$ 13,770.00
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	20	TON	\$ 125.00	\$ 2,500.00
417.1	MILLING BITUMINOUS SURFACES	1140	SY	\$ 4.00	\$ 4,560.00
604.12	CATCH BASINS TYPE B	2	U	\$ 2,150.00	\$ 4,300.00
608.24	4" CONCRETE SIDEWALK (F)	280	SY	\$ 90.00	\$ 25,200.00
608.541	DETECTABLE WARNING DEVICES, PLASTIC	2	U	\$ 250.00	\$ 500.00
609.01	STRAIGHT GRANITE CURB	280	LF	\$ 31.00	\$ 8,680.00
615.0071	STEEL SIGN POSTS	60	LB	\$ 10.00	\$ 600.00
615.022	TRAFFIC SIGN TYPE B, BREAKAWAY MOUNTS (F)	25	SF	\$ 110.00	\$ 2,750.00
615.03	TRAFFIC SIGN TYPE C (F)	25	SF	\$ 75.00	\$ 1,875.00
615.9901	REMOVE AND STOCKPILE TRAFFIC SIGN	10	U	\$ 100.00	\$ 1,000.00
618.6	UNIFORMED OFFICERS	3000	\$	\$ 1.00	\$ 3,000.00
618.7	FLAGGERS	100	HR	\$ 30.00	\$ 3,000.00
619.1	MAINTENANCE OF TRAFFIC	1	U	\$ 10,000.00	\$ 10,000.00
628.2	SAWED BITUMINOUS PAVEMENT	200	LF	\$ 1.00	\$ 200.00
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE	810	LF	\$ 0.25	\$ 202.50
632.0112	RETROREFLECTIVE PAINT PAVE. MARKING, 12" LINE	350	LF	\$ 2.00	\$ 700.00
632.0124	RETROREFLECTIVE PAINT PAVE. MARKING, 24" LINE	110	LF	\$ 4.00	\$ 440.00
	<b>Contingency Items Subtotal</b>				<b>\$91,027.50</b>
692.	MOBILIZATION	1	U	\$ 5,000.00	\$ 5,000.00
	<b>Subtotal</b>				<b>\$96,027.50</b>
	<b>Total</b>				<b>\$97,000.00</b>





NASHUA  
X - AOO1(272)  
16394  
East Hollis Street

844 - 260A

6/16/2015

## RAILROAD AGREEMENT WORKSHEET

### PRELIMINARY ENGINEERING - AUTHORIZED

State of NH, City of Nashua and Pan Am RR Funds 90% STP (FY 14 LS4E)

10% Indirects	\$25,000.00	X	0.1	\$ 25,000.00
Total Participating Preliminary Engineering Costs				\$ 2,500.00
90% Federal Aid				\$ 27,500.00
10% City Aid				\$ 24,750.00
				\$ 2,750.00

### CONSTRUCTION - PROGRAMMED

RR Forces, Pan Am Railways, Hazard Elimination Funds 90% STP (FY 15 LS4E)

5% Construction Engineering Costs	\$157,300.20	X	0.05	\$157,300.20
Subtotal				\$ 7,865.01
10% Indirects	\$165,165.21	X	0.1	\$165,165.21
Total Participating Hazard Elimination Construction Costs				\$ 16,516.52
90% Federal Aid				\$181,681.73
10% City Aid				\$163,513.56
				\$ 18,168.17

City Roadway Work, Hazard Elimination Funds 90% STP (FY 15 LS4E)

5% Construction Engineering Costs	\$97,000.00	X	0.05	\$ 97,000.00
Subtotal				\$ 4,850.00
10% Indirects	\$101,850.00	X	0.1	\$101,850.00
Total Participating Hazard Elimination Construction Costs				\$ 10,185.00
90% Federal Aid				\$112,035.00
10% City Aid				\$100,831.50
				\$ 11,203.50

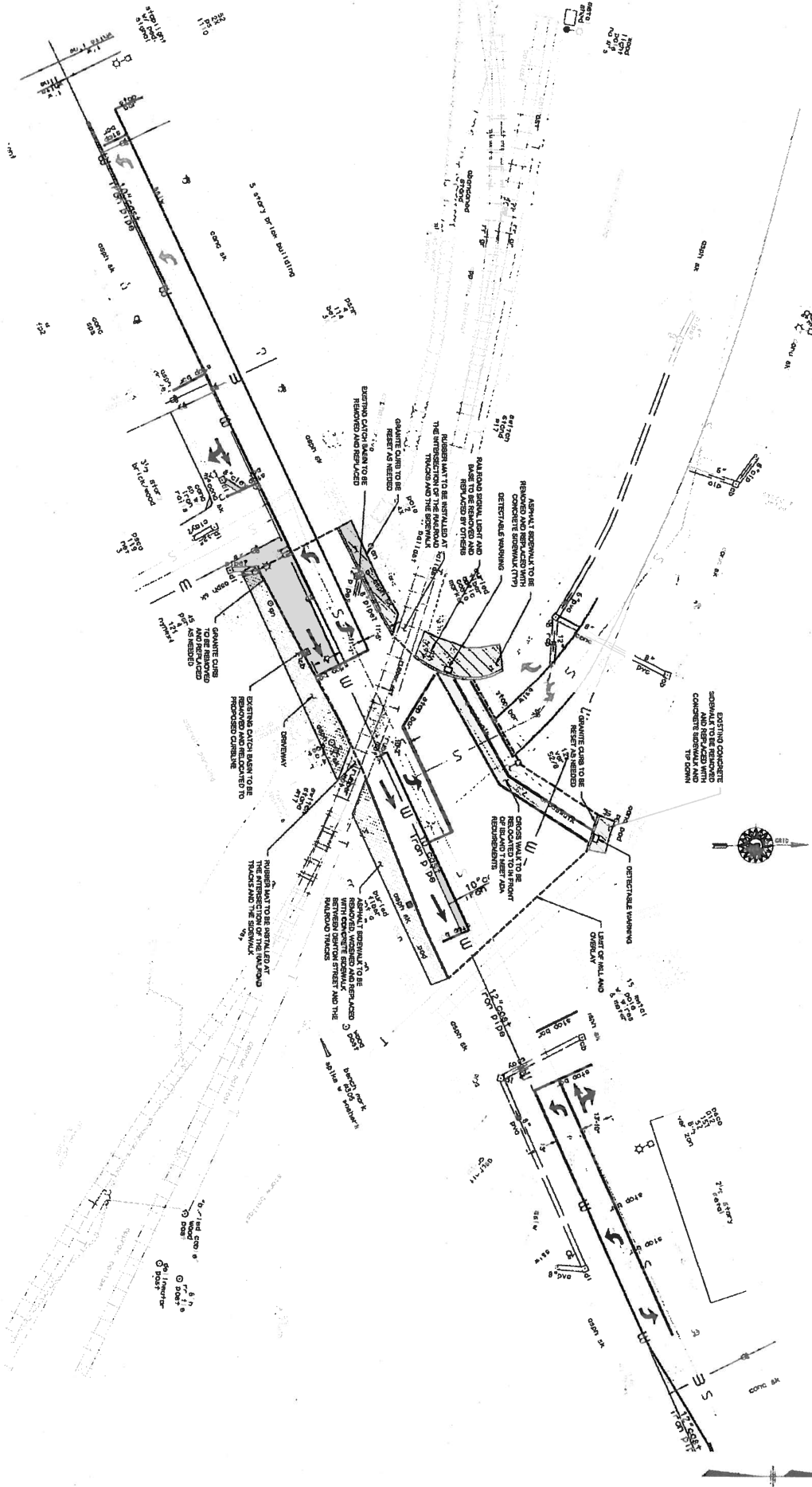
Pan Am Railways, Protective Devices Funds 100% STP (FY 15 LS50)

5% Construction Engineering Costs	\$274,636.20	X	0.05	\$274,636.20
Subtotal				\$ 13,731.81
10% Indirects	\$288,368.01	X	0.1	\$288,368.01
Total Participating RR Protective Devices Costs				\$ 28,836.80
100% Federal Aid				\$317,204.81

Total Preliminary Engineering				\$ 27,500.00
Total Construction				\$610,921.54
Total (Including Preliminary Engineering)				\$638,421.54
Total Federal Aid Required				\$606,299.87
Total City Aid Required				\$ 32,121.67
Total Aid Required				\$638,421.54

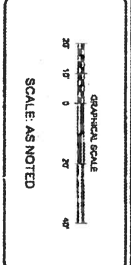


NOTES  
1. THE BASE PLAN WAS PREPARED BY THE STATE OF NEW HAMPSHIRE AND THE BUREAU OF HIGHWAY DESIGN. IN A PLAN TITLED "GENERAL PLAN"



  
CITY OF NASHUA NEW HAMPSHIRE  
CITY ENGINEER'S OFFICE  
9 RIVERSIDE STREET  
NASHUA, NEW HAMPSHIRE 03062

NO.	REVISION DESCRIPTION	DATE



**DRAFT**

DRAWN BY	
DESIGNED BY	
REVIEWED BY	

NHDOT - RAILROAD CROSSING  
EAST HOLLIS STREET  
PROPOSED PLAN  
JUNE 2015

FIGURE 1